6 $D = S_x / (S_x + S_y),$

- 7 wherein Sx and Sy represent the elliptic equivalent dimensions in horizontal and
- 8 vertical dimensions respectively, in a plane the core.

9

- 1 40. (previously presented) The apparatus as defined in claim 35 wherein the powdered
- 2 soft magnetic material possesses a maximum magnetic permeability given a
- 3 predetermined maximum RF antenna power loss.

4

- 1 41. (previously presented) The apparatus of claim 35 wherein said flux density is greater
- 2 than that of a magnetic core consisting primarily of ferrite.

3

- 1 42. (previously presented) The apparatus of claim 35 wherein the magnetic core further
- 2 comprises relative dimensions that are related to the direction of the RF magnetic
- field and to the magnetic permeability of the powdered soft magnetic material.

4

1

43-50 canceled.

2

The Commissioner is hereby authorized to charge any fees and credit any overpayments to **Deposit Account** <u>02-0429 (414-13268WOCP-US)</u>.

Respectfully submitted

IP Snim

Date: December 15, 2004

414-13268WOCP-US

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